



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,238	09/02/2003	Jesse R. Walker	P15875	4873

31817 7590 01/04/2007
SCHWABE, WILLIAMSON & WYATT
PACWEST CENTER, SUITE 1900
1211 S.W. FIFTH AVE.
PORTLAND, OR 97204

EXAMINER

KIM, WESLEY LEO

ART UNIT	PAPER NUMBER
----------	--------------

2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/654,238

Applicant(s)

WALKER, JESSE R.

Examiner

Wesley L. Kim

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/7/06 has been entered.

Response to Amendment

This Office Action is in response to Amendment filed on 11/7/06.

- Claims 1, 5, 9, 13, and 17 are currently amended.
- Claims 1-20 are pending in the current Office Action.

Response to Arguments

1. Applicant's arguments with respect to claims 1, 5, 9, 13, and 17 have been considered but are moot in view of the new ground(s) of rejection. The Applicant argues that defining an access point nonce of an AP is not disclosed by Meier. (See new grounds of rejection below).
2. Applicant's arguments filed 8/1/06 have been fully considered but they are not persuasive.
 - The applicant argues that Meier transmits a key nonce from a subnet context manager to an access point, which forwards the key nonce to the user station,

Art Unit: 2617

therefore Meier does not teach transmitting by an access point, an access point nonce in claims 1, 5, 9, 13, and 17.

The examiner respectfully disagrees. In the claim language, the AP nonce does not have to be originated from the AP. To the examiner an AP nonce seems appears to be a nonce, which is directed towards the mobile station from the access point. Although the nonce is originated from the subnet context manager, the AP nonce still gets to the mobile device from the access point, which is why the examiner calls the key nonce an AP nonce. The examiner believes that the art applied to the claims read on the amended claim.

With regards to transmission of a key nonce as opposed to an AP nonce, the examiner determines that a nonce is transmitted via the AP to the user station within a key. Therefore the nonce is transmitted from the AP to the user station but it just so happens to be within a key. The claim language does not prohibit the examiner from making such interpretations since the examiner is given the right to give the claim language the broadest possible interpretation.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Meier et al (U.S. Pub 2004/0103282 A1).

Regarding Claims 1, 5, 9, and 13, Meier teaches an article of manufacture (Fig.6;616, mobile device i.e. laptop, pda, or mobile phone) comprising a storage medium having stored thereon instructions that, when executed by a computing platform, result in an authenticated key exchange (from Fig.8, it is inherent the laptop has storage medium with instructions resulting in an authenticated key exchange), by: transmitting a probe request to an access point (Fig.8; 1st arrow transmits a probe request to an access point); and in response to the probe request, transmitting, from an access point (AP), an AP nonce in a probe response (Fig.8; 18th arrow transmits AP NONCE to mobile node), wherein the AP nonce is defined as a nonce of the AP (Fig.8; 18th arrow transmits AP NONCE to mobile node, the AP NONCE is defined as a nonce of the AP by the SCM, therefore the NONCE is directed towards the corresponding AP).

Regarding Claims 2, 7, 10, and 15, Meier teaches all the limitations as recited in claims 1, 6, 9 and 14, and Meier further teaches receiving, by the AP, a pairwise master key based information element as a reassociate request from a user station that received the transmitted AP nonce (Fig.8;19th arrow transmits pairwise master key base information element), wherein the user station generates the pairwise master key (PMK) based information element based on the nonce transmitted in the probe response, a user station nonce, and a message integrity code (MIC) (Fig.8;19th arrow is based on the nonce transmitted in the probe

response and it includes the additional NONCE_{MN} and MIC, therefore the PMK based information element is based on the nonce transmitted in the probe response, an additional nonce, and an MIC), the message integrity code being derived from the pairwise master key (Par.93 and Par.237, the PMK derives the PTKs and the PTKs derive the MIC).

Regarding Claims 3, 6, 11 and 14, Meier teaches all the limitations as recited in claims 2, 5, 10, and 13, and Meier further teaches generating, by the AP, a pairwise master key response element based on the user station nonce and an additional message integrity code (Fig.8;22nd arrow is sent based on an additional MIC(see 22nd arrow) and the additional NONCE_{MN} sent earlier at the 19th arrow), the additional message integrity code being derived from the pairwise master key (Par.93 and Par.237, the PMK derives the PTKs and the PTKs derive the MIC); and transmitting, by the AP, the pairwise master response element as a reassociation response (Fig.8;22nd arrow is a response to the reassociation request sent at the 19th arrow).

Regarding Claims 4, 8, 12, and 16, A method as claimed in claim 3, further comprising communicating, by the AP, with the user station after the user station receives the reassociation response (Par.266;19-22).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2617

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier et al (U.S. Pub 2004/0103282 A1) in view of Toyoshima (U.S. Pub 2002/0080741 A1).

Regarding Claim 17, Meier teaches generating a probe request to be transmitted to an access point, and to receive an AP nonce transmitted in response to the probe request (See rejection of Claim 1) wherein the AP nonce is defined as a nonce of the AP (Fig.8; 18th arrow transmits AP NONCE to mobile node, the AP NONCE is defined as a nonce of the AP by the SCM, therefore the NONCE is directed towards the corresponding AP), however Meier **is silent on** the apparatus, comprising: an omnidirectional antenna; a transceiver coupled to said omnidirectional antenna; and a baseband processor.

Toyoshima teaches that it is well known in the art that a mobile device comprises an omnidirectional antenna (Fig.1;10, antenna is omnidirectional); a transceiver (Fig.1;40 and 50, transmitter and receiver) coupled to said omnidirectional antenna; and a baseband processor (Fig.1;60).

To one of ordinary skill in the art, it would have been obvious to modify Meier with Toyoshima, such that the apparatus, comprises: an omnidirectional antenna; a transceiver coupled to said omnidirectional antenna; and a baseband processor, to provide the components which perform what Meier already teaches, i.e. a mobile phone is capable of generating a probe request to be transmitted to an access point, and to receive a nonce transmitted in response to the probe request.

Art Unit: 2617

Regarding Claim 18, See rejection of claim 3.

Regarding Claim 19, See rejection of claim 2.

Regarding Claim 20, See rejection of claim 4.

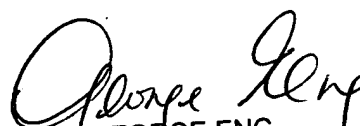
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley L. Kim whose telephone number is 571-272-7867. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WLK



GEORGE ENG
SUPERVISORY PATENT EXAMINER